

A NEW SPECIES OF THE GENUS *CRAESUS* (HYMENOPTERA:
TENTHREDINIDAE) FROM JAPAN FEEDING ON
JUGLANS (JUGLANDACEAE)

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Abstract.—*Craesus kondoi*, n. sp., from Honshu, Japan, is described and illustrated. It was reared from larvae feeding on leaves of *Juglans ailanthifolia* Carr. (Juglandaceae).

Key Words: Symphyta, Tenthredinidae, Nematinae, *Craesus*, new species, food plant, *Juglans ailanthifolia*

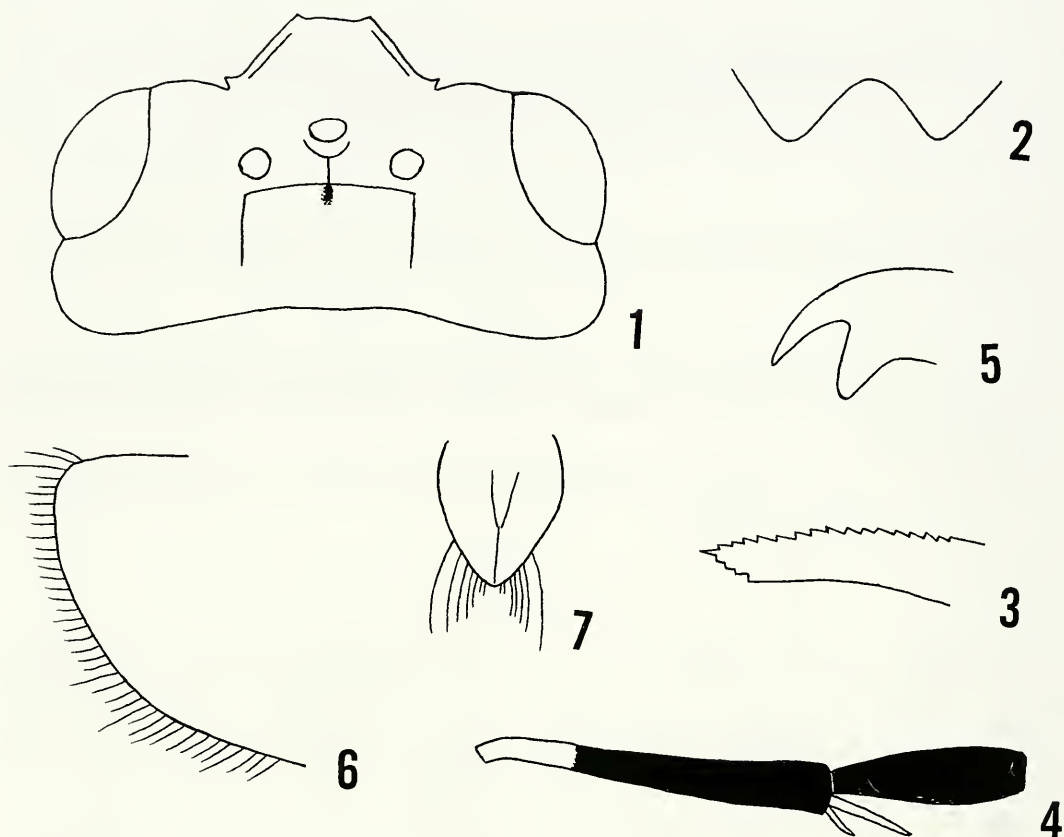
The genus *Craesus* Leach, 1817, is distributed in the Holarctic and Oriental regions (Benson 1963; Smith 1972). There are about 20 described world species (Taeger and Blank 2005). Among the Nematinae, *Craesus* is characterized by the expanded and laterally compressed hind basitarsus and apex of the hind tibia (Fig. 4). Larvae of most species of *Craesus* feed on the foliage of Betulaceae, Fagaceae, and Juglandaceae (Smith 1972; Togashi 1997). Six species are known from Japan, *C. betulae* Togashi, 1997, *C. japonicus* Takeuchi, 1921, *C. morimotoi* Togashi 1963, *C. platycaryae* Togashi, 1997, *C. rotundiformis* Togashi, 1997, and *C. shinoharai* Beneš, 1990 (Togashi 1997).

Recently, I examined six females and one male of a species of *Craesus* through the courtesy of Mr. T. Kondo which were reared from larvae feeding on the leaves of *Juglans ailanthifolia* Carr. According to the literature, these specimens closely resemble *C. japonica* from Japan and *C. castaneae* Rohwer from North America, but they are distinguished from these two species by the wing maculation and by the shape of the serrulae of the lancet. They also resemble *C. juglandis* Beneš, de-

scribed from Korea and also from *Juglans ailanthifolia*, but are distinguished by the color of the clypeus, shape of the hind basitarsis, and length of the petiole of the anal cell of the hind wing. Therefore, I consider these specimens to represent a new species, and I describe and illustrate this species and give a revised key to the species of *Craesus* of Japan.

KEY TO JAPANESE SPECIES OF *CRAESUS*
(MODIFIED FROM TOGASHI 1997)

1. Female 2
– Male 8
2. Sawsheath nearly truncate in dorsal view;
postocellar area rectangular 3
– Sawsheath subacute (Fig. 7) or rounded in
dorsal view; postocellar area rectangular or
subquadrate 4
3. Hind tibia entirely black; inner hind tibial
spur nearly straight *morimotoi* Togashi
– Basal third of hind tibia milky white; inner
hind tibial spur strongly curved.
. *shinoharai* Beneš
4. Basal half of hind tibia milky white;
sawsheath rounded in dorsal view; lancet
with 14 serrulae *rotundiformis* Togashi
– Basal quarter or third of hind tibia milky
white (Fig. 4); sawsheath subacute in dor-
sal view (Fig. 7) 5
5. Sawsheath broad in dorsal view; 3rd
antennal segment as long as 4th; lancet

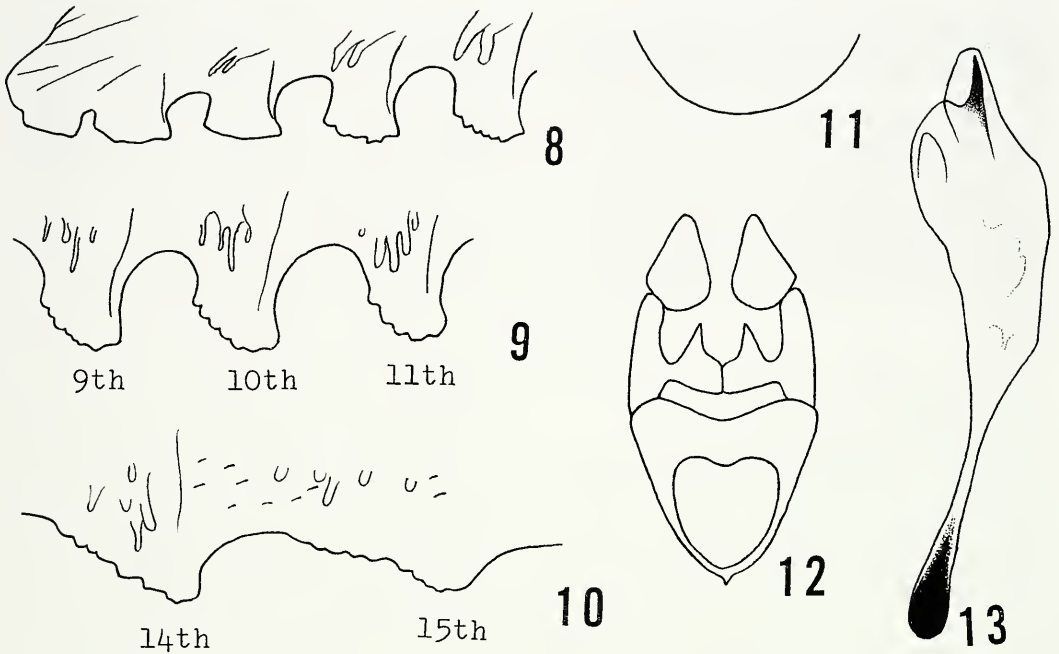


Figs. 1-7. *Craesus kondoi*. 1, Head, dorsal view. 2, Clypeus. 3, Inner fore tibial spur. 4, Hind tibia and basitarsus. 5, Tarsal claw. 6, Sawsheath, lateral view. 7, Sawsheath, dorsal view.

- with 14 serrulae (food plant, *Betula ernali* Sieb. and Zucc.) *betulae* Togashi
- Sawsheath narrow in dorsal view (Fig. 7); 3rd antennal segment shorter than 4th 6
- 6. Third antennal segment shorter than 4th (ratio about 1.0:1.2-1.5); lancet with 16 serrulae (food plant, *Platycarya strobilacea* Sieb. and Zucc.). *platycaryae* Togashi
- Third antennal segment slightly shorter than 4th (ratio about 1.0:1.1) 7
- 7. Forewing hyaline with distinct dark band below stigma; basal third of hind tibia milky white; hind basitarsus about 1.4× length of following 4 segments combined; lancet with 13 serrulae, serrulae shallow (food plant, *Alnus japonica* Sieb. and Zucc.) *japonicus* Takeuchi
- Forewing hyaline, without a distinct dark band; basal quarter of hind tibia milky white (Fig. 4); hind basitarsus about 2.0× length of following 4 segments combined; lancet with 15 serrulae, serrulae deep (Fig. 9) (food plant, *Juglans ailanthifolia* Carr.) *kondoi*, n. sp.
- 8. Apical margin of subgenital plate broadly rounded (Fig. 11); harpes subquadrate or triangular (Fig. 12) 9
- Apical margin of subgenital plate narrowly rounded or truncate; harpes elongate or rectangular 10
- 9. Harpes subquadrate; mesal margin of parapenis acute *japonicus* Takeuchi
- Harpes nearly triangular, elongated; mesal margin of parapenis truncate (Fig. 12) *kondoi*, n. sp.
- 10. Apical margin of subgenital plate narrowly rounded; harpes elongate. *platycaryae* Togashi
- Apical margin of subgenital plate truncate; harpes subquadrate *betulae* Togashi

***Craesus kondoi* Togashi, new species**
(Figs. 1-13)

Female.—Length, 8-9 mm. *Color:* Body including antenna black. Wings hyaline, stigma and veins dark brown to



Figs. 8–13. *Craesus kondoi*. 8, Apical serrulae of lancet. 9, 9th to 11th serrulae of lancet. 10, 14th and 15th serrulae of lancet. 11, Male subgenital plate. 12, Ventral view of genital capsule. 13, Penis valve, lateral view.

black. Legs black with following milky white: basal $\frac{1}{4}$ of hind tibia, apical portion of hind coxa, and hind trochanters. Apical $\frac{3}{4}$ of foretibia and basitarsis dark brown.

Head: Postocellar area rectangular, length:width about 1.0:1.4, moderately convex, anterior $\frac{1}{3}$ of postocellar area with distinct longitudinal furrow, connected with interocellar furrow; circumocellar, interocellar, and postocellar furrows distinct; lateral furrows distinct and deep; OOL:POL:OCL = 0.8:1.0:1.1; frontal area slightly concave, with median longitudinal furrow; median fovea distinct and deep, circular in outline; lateral fovea distinct and deep, circular in outline; antenno-ocular distance $1.1\times$ length of distance between antennal sockets; supraclypeal area slightly convex; clypeus convex, anterior margin emarginated (Fig. 2); labrum convex; malar space shorter than diameter of front ocellus. Antenna $1.1\times$ length of costa + stigma of

forewing; relative lengths of segments about 1.7:1.0:6.5:7.0:6.3:5.0:4.5:4.5:4.0; pedicel subquadrate.

Thorax: Mesoscutellum flattened; breadth of cenchrus nearly as long as distance between cenchri. Wings: 2nd cubital cell very long, about $4.0\times$ length of 1st cubital cell; petiole of anal cell of hindwing about $1.2\times$ length of nervulus. Legs: Apical width of hind tibia about $0.5\times$ length of inner hind tibial spur; hind tibia about $1.7\times$ length of hind basitarsus; hind basitarsis nearly $2.0\times$ length of following 4 segments combined; length of hind basitarsus $2.7\times$ longer than broad; apical tooth of claw slender (Fig. 5).

Abdomen: Sawsheath, in lateral and dorsal views, as in Figs. 6–7; cercus longer than sawsheath in dorsal view; lancet with 15 serrulae (Figs. 8–10), serrulae deep (Fig. 9).

Punctuation: Head and thorax covered with fine setigerous punctures; central

portion of mesoscutellar appendage distinctly and sparsely punctured, laterally distinctly and closely punctured. Abdominal tergites covered with fine setigerous punctures.

Male.—Length, 7 mm. Similar to female in color and structure except for sexual segments. Apical margin of subgenital plate broadly rounded (Fig. 11); genitalia as in Fig. 12; penis valve as in Fig. 13.

Food plant.—*Juglans ailanthifolia* Carr. (Juglandaceae).

Distribution.—Japan (Honshu).

Types.—Holotype ♀, 2.X.2000, emerged from larva feeding on leaves of *Juglans ailanthifolia*; collected in Takahashi City, Okayama Prefecture, Japan, T. Kondo leg. Paratypes: 5 ♀ and 1 ♂, same data as for holotype except 4–7.X.2000. Holotype and three paratypes (including male) deposited in the National Science Museum (Natural History), Tokyo. One paratype deposited in the National Museum of Natural History, Smithsonian Institution, Washington, D.C., and 2 paratypes deposited in the collection of the Kurashiki Museum, Kurashiki City, Okayama Prefecture.

Etymology.—This species is named after Mr. T. Kondo, Kurashiki City, who collected the specimens.

Remarks.—This new species is closely allied to *C. japonicus* and keys to *C. japonicus* in Togashi (1997), but it is distinguished from the latter by the entirely clear forewing (with a distinct dark band below the stigma in *C. japonicus*), by the hind basitarsus nearly twice as long as the following four segments combined (only slightly longer in *C. japonicus*), by the structure of the lancet (compare Figs. 8–10 and Figs. 13, 17, 21 in Togashi 1997), and by the rather triangular harpes (rectangular in *C. japonicus*, compare Fig. 28 and Fig. 12 in Togashi 1997).

From *C. castaneae*, the new species is distinguished by the clear forewing

(lightly and uniformly infuscated in *C. castaneae*), by the black clypeus and labrum (apex of clypeus and labrum whitish in *C. castaneae*), by the black midbasitarsus (whitish in *C. castaneae*), and by the white hind trochanters (black in *C. castaneae*).

From *C. juglandis*, it is distinguished by the black clypeus (rufous except for lateral part in *C. juglandis*), by the ratio of the length and width of the hind basitarsus, about 3.5:1.0 (3.0:1.0 in *C. juglandis*), by the length of the petiole of the anal cell of the hind wing, longer than the nervulus (scarcely as long in *C. juglandis*), by the 15 serrulae of the lancet (14 in *C. juglandis*), by the small size, 8–9 mm (9.8 mm in *C. juglandis*), by the circular median fovea (elongate in *C. juglandis*), by the rounded apex of the sawsheath in lateral view (acute in *C. juglandis*), and by the rounded apex of the subgenital plate (subacute in *C. juglandis*).

From *C. eglagratus* Wei and Nie, 1999, the new species is distinguished by the 15 serrulae of the lancet (14 in *C. eglagratus*) and by the shape of the anterior margin of the subgenital plate (triangular in *C. eglagratus*).

From *C. nigrodorsatus* Malaise, it is distinguished by the black anterior four tibiae (white in *C. nigrodorsatus*) and by the rounded apex of the sawsheath in lateral view (subacute in *C. nigrodorsatus*).

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